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FRIDAY, AUGUST 30, 1895.

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THE AIMS OF ANTHROPOLOGY.*

A MODERN philosopher has advanced the maxim that what is first in thought is last in expression; illustrating it by the rules of grammar, which are present even in un-

* Address by the retiring President of the American Association for the Advancement of Science, at the Springfield meeting, August 29, 1895.

written languages, whose speakers have no idea of syntax or parts of speech.*

It may be that this is the reason why man, who has ever been the most important creature to himself in existence, has never seriously and to the best of his abilities made a study of his own nature, its wants and its weaknesses, and how best he could satisfy the one and amend the other.

The branch of human learning which undertakes to do this is one of the newest of the sciences; in fact, it has scarcely yet gained admission as a science at all, and is rather looked upon as a dilettante occupation, suited to persons of elegant leisure and retired old gentlemen, and without any very direct or visible practical applications of concern with the daily affairs of life.

It is with the intention of correcting this prevalent impression that I address you to-day. My endeavor will be to point out both the immediate and remote aims of the science of anthropology, and to illustrate by some examples the bearings they have, or surely soon will have, on the thoughts and acts of civilized communities and intelligent individuals.

It is well at the outset to say that I use the term anthropology in the sense in which it has been adopted by this Association, that is, to include the study of the whole

* Professor James Ferrier, in his *Institutes of Metaphysic*.

of man, his psychical as well as his physical nature, and the products of all his activities, whether in the past or in the present. By some writers, especially on the continent of Europe, the term anthropology is restricted to what we call physical anthropology or somatology, a limitation of the generic term which we cannot but deplore. Others again, and some of worthy note, would exclude from it the realm of history, confining it in time to the research of prehistoric epochs, and in extent to the investigation of savage nations.

I cannot too positively protest against such opinions. Thus 'cabined, cribbed, confined,' it could never soar to that lofty eminence whence it could survey the whole course of the life of the species, note the development of its inborn tendencies, and mark the lines along which it has been moving since the first syllables of recorded time; for this, and nothing less than this, is the bold ambition toward which aspires this crowning bough of the tree of human knowledge.

You will readily understand from this the magnitude of the material which anthropology includes within its domain. First, it investigates the physical life of man in all its stages and in every direction. While he is still folded in the womb, it watches his embryonic progress through those lower forms, which seem the reminiscences of far-off stages of the evolution of the species, until the child is born unto the world, endowed with the heritage transmitted from innumerable ancestors and already rich in personal experiences from its prenatal life. These combined decide the individual's race and strain, and potently incline, if they do not absolutely coerce, his tastes and ambitions, his fears and hopes, his failure or success.

On the differences thus brought about, and later nourished by the environment, biology, as applied to the human species, is

based; and on them, as expressed in aggregates, ethnography, the separation of the species into subspecies and smaller groups, is founded. It has been observed that numerous and persistent, although often slight differences arose in remote times, independently, on each of the great continental areas, sufficient to characterize with accuracy these subspecies. We therefore give to such the terms 'races' or 'varieties' of man.

All these are the physical traits of man. They are studied by the anatomist, the embryologist, the physician; and the closest attention to them is indispensable, if we would attain a correct understanding of the creature man, and his position in the chain of organic life.

But there is another vast field of study wholly apart from this and even more fruitful in revelations. It illustrates man's mental or psychical nature, his passions and instincts, his emotions and thoughts, his powers of ratiocination, volition and expression. These are preserved and displayed subjectively in his governments and religions, his laws and his languages, his words and his writings; and, objectively, in his manufactures and structures, in the environment which he himself creates—in other words, in all that which we call the arts, be they 'hooked to some useful end,' or designed to give pleasure only.

It is not sufficient to study these as we find them in the present. We should learn little by such a procedure. What we are especially seeking is to discover their laws of growth, and this can only be done by tracing these outward expressions of the inward faculties step by step back to their incipency. This leads us inevitably to that branch of learning which is known as archaeology, 'the study of ancient things,' and more and more to that part of archaeology called prehistoric, for that concerns itself with the most ancient; and the most

ancient is the simplest, and the simplest is the most transparent, and therefore the most instructive.

Prehistoric archæology is a new science. I can remember when neither its name nor its methods were known to the most learned anthropologists. But it has already taught us by incontrovertible arguments a wonderful truth, a truth opposing and reducing to nought many teachings of the sages and seers of past generations. They imagined that the primal man had fallen from some high estate; that he had forfeited by his own falseness, or been driven by some hard fate, from a pristine Paradise, an Eden garden, an Arcady; that his ancestors were demi-gods and heroes, himself their degenerate descendant.

How has prehistoric archæology reversed this picture? We know beyond cavil or question that the earliest was also the lowest man, the most ignorant, the most brutish, naked, homeless, half-speechless. But the gloom surrounding this distant background of the race is relieved by rays of glory; for with knowledge not less positive are we assured that through all hither time, through seeming retrogressions and darkened epochs, the advance of the race in the main toward a condition better by every standard has been certain and steady, 'ne'er known retiring ebb, but kept due on.'

Archæology, however, is, after all, a dealing with dry bones, a series of inferences from inanimate objects. The color and the warmth of life, it never has. How can we divine the real meaning of the fragments and ruins, the forgotten symbols and the perished gods, it shows us?

The means has been found, and this through a discovery little less than marvelous, the most pregnant of all that anthropology has yet offered, not yet appreciated even by the learned. This discovery is that of the psychical unity of man, the parallelism of his development everywhere and in

all time; nay, more, the high absolute uniformity of his thoughts and actions, his aims and methods, when in the same degree of development, no matter where he is, or in what epoch living. Scarcely anything but his geographical environment, using that term in its larger sense, seems to modify the monotonous sameness of his creations.

I shall refer more than once to this discovery; for its full recognition is the corner stone of true anthropology. In this connection I refer to it for its application to archæology. It teaches us this: that when we find a living nation of low culture, we are safe in taking its modes of thought and feeling as analogous to those of extinct tribes whose remains show them to have been in about the same stage of culture.

This emphasizes the importance of a prolonged and profound investigation of the few savage tribes who still exist; for although none of them is as rude or as brute-like as primitive man, they stand nearest to his condition, and, moreover, so rapid nowadays is the extension of culture that probably not one of them will remain untouched by its presence another score of years.

Another discovery, also very recent, has enabled us to throw light on the prehistoric or forgotten past. We have found that much of it, thought to be long since dead, is still alive and in our midst, under forms easily enough recognized when our attention is directed to them. This branch of anthropology is known as Folklore. It investigates the stories, the superstitions, the beliefs and customs which prevail among the unlettered, the isolated and the young; for these are nothing less than survivals of the mythologies, the legal usages and the sacred rites of earlier generations. It is surprising to observe how much of the past we have been able to reconstruct from this humble and long neglected material.

From what I have already said, you will understand some of the aims of anthropology, those which I will call its 'immediate' aims. They are embraced in the collection of accurate information about man and men, about the individual and the group, as they exist now, and as they have existed at any and all times in the past; here where we are, and on every continent and island of the globe.

We desire to know about a man, his weight and his measure, the shape of his head, the color of his skin and the curl of his hair; we would pry into all his secrets and his habits, discover his deficiencies and debilities, learn his language, and inquire about his politics and his religion, yes, probe those recesses of his body and his soul which he conceals from wife and brother. This we would do with every man and every woman, and, not content with the doing it, we would register all these facts in tables and columns, so that they should become perpetual records, to which we give the name 'vital statistics.'

The generations of the past escape such personal investigation, but not our pursuit. We rifle their graves, measure their skulls, and analyze their bones; we carry to our museums the utensils and weapons, the gods and jewels, which sad and loving hands laid beside them; we dig up the foundations of their houses and cart off the monuments which their proud kings set up. Nothing is sacred to us; and yet nothing to us is vile or worthless. The broken potsherd, the half-gnawed bone, cast on the refuse heap, conveys a message to us more pregnant with meaning, more indicative of what the people were, than the boastful inscription which their king caused to be engraved on royal marble.

This gleaning and gathering, this collecting and storing of facts about man from all quarters of the world and all epochs of his existence, is the first and indispensable aim

of anthropologic science. It is pressing and urgent beyond all other aims at this period of its existence as a science; for here more than elsewhere we feel the force of the Hippocratic warning, that the time is short and the opportunity fleeting. Every day there perish priceless relics of the past, every year the languages, the habits and the modes of thought of the surviving tribes which represent the earlier condition of the whole species, are increasingly transformed and lost through the extension of civilization. It devolves on the scholars of this generation to be up and doing in these fields of research; for those of the next will find many a chance lost forever, of which we can avail ourselves.

And here let me insert a few much needed words of counsel on this portion of my theme. Why is it that even in scientific circles so little attention is paid to the proper training of observers and collectors in anthropology?

We erect stately museums, we purchase costly specimens, we send out expensive expeditions; but where are the universities, the institutions of higher education, that train young men how to observe, how to explore and collect in this branch? As an eminent ethnologist has remarked, in any other department of science, in that, for instance, which deals with flowers or with butterflies, no institution would dream of sending a collector into the field who lacked all preliminary training in the line, or knowledge of it; but in anthropology the opinion seems universal that such preparation is quite needless.* Carlyle used to say that every man feels himself competent to be a gentleman farmer or a crown prince;

* See the pertinent remarks of Dr. S. R. Steinmetz in the Einleitung to his *Ethnologische Studien zur Ersten Entwicklung der Strafe* (Leiden, 1894). I have urged this point further in a pamphlet entitled *Anthropology; as a Science and as a branch of University Education in the United States* (Philadelphia, 1892).

our institutions seem to think that every man is competent to be an anthropologist and archæologist; and let a plausible explorer present himself, the last question put to him will be, whether he has any fitness for the job.

Hence our museums are crammed with doubtful specimens, vaguely located, and our volumes of travel with incomplete or wholly incorrect statements, worse than purely fictitious ones, because we know them to be the fruit of honest intentions, and therefore give them credit.

But, you will naturally ask, to what end this accumulating and collecting, this filling of museums with the art-products of savages and the ghastly contents of charnel houses? Why write down their stupid stories and make notes of their obscene rites? When it shall be done, or as good as done, what use can be made of them beyond satisfying a profitless curiosity?

This leads me to explain another branch of anthropology to which I have not yet alluded, one which introduces us to other aims of this science, quite distinct from those I have mentioned. That branch is *Ethnology*.

Ethnology in its true sense represents the application of the principles of inductive philosophy to the products of man's faculties. You are aware that that philosophy proceeds from observed facts alone; it discards all preconceived opinions concerning these facts; it renounces all allegiance to dogma, or doctrine or intuition; in short, to every form of statement that is not capable of verification. Its method of procedure is by comparison, that is, by the logical equations of similarity and diversity, of identity and difference; and on these it bases those generalizations which range the isolated fact under the general law, of which it is at once the exponent and the proof.

By such comparisons, *ethnology* aims to define in clear terms the influence which

the geographical and other environment exercises on the individual, the social group and the race; and, conversely, how much in each remains unaltered by the external forces, and what residual elements are left, defiant of surroundings, wholly personal, purely human. Thus, rising to wider and wider circles of observation and generalization, it will be able at last to offer a conclusive and exhaustive connotation of what man is—a necessary preliminary, mark you, to that other question, so often and so ignorantly answered in the past, as to what he should be.

Ethnology, however, does not and should not concern itself with this latter inquiry. Its own field is broad enough, and the harvest offered is rich enough. Its materials are drawn from the whole of history and from pre-history. Those writers who limit its scope to the explanation of the phenomena of primitive social life only have so done because these phenomena are simpler in such conditions, not that the methods of *ethnology* are applicable only to such. On the contrary, they are not merely suitable, they are necessary to all the facts of history, if we would learn their true meaning and import. The time will come, and that soon, when sound historians will adopt as their guide the principles and methods of *ethnologic science*, because by these alone can they assign to the isolated fact its right place in the vast structure of human development.

In the past, histories have told of little but of kings and their wars; some writers of recent date have remembered there is such a thing as the People, and have essayed to present its humble annals; but how few have even attempted to avail themselves of the myriad side-lights which *ethnology* can throw on the motives and the manners of a people, its impulses and acquisitions?

It is the constant aim of *ethnology* to

present its results free from bias. It deprecates alike enthusiasm and antipathy. Like Spinoza's God, *nullum amat, nullum odit*. Its aim is to compare dispassionately all the acts and arts of man, his philosophies and religions, his social schemes and personal plans, weighing and analyzing them, separating the local and temporal in them from the permanent and general, explaining the former by the conditions of time and place, referring the latter to the category of qualities which make up the oneness of humanity, the solid ground on which he who hereafter builds, 'will build for aye.'

This, then, briefly stated, is the aim of that department of anthropology which we call ethnology. In yet fewer words, its mission is 'to define the universal in humanity,' as distinguished from all those traits which are the products of fluctuating environments.

This universal, however, is to be discovered, not assumed. The fatal flaw in the arguments of most philosophers is that they frame a theory of what man is and what are the laws of his growth, and pile up proofs of these, neglecting the counter-evidence, and passing in silence what contradicts their hypotheses.

Take, for instance, the doctrine of evolution as applied to man. It is not only a doctrine but a dogma with many scientists. They look with theological ire on any one who questions it. I have already said that in the long run and the general average it has been true of man. But that we have any certainty that it will continue true is a mistake; or that it has been true of the vast majority of individuals or ethnic groups is another mistake. As the basis for a boastful and confident optimism it is as shaky as sand. Taken at its real value, as the provisional and partial result of our observations, it is a useful guide; but swallowed with unquestioning faith, as a final

law of the universe, it is not a whit more inspiring than the narrowest dogma of religious bigotry.

We have no right, indeed, to assume that there is anything universal in humanity until we have proved it. But this has been done. Its demonstration is the last and greatest conquest of ethnology, and it is so complete as to be bewildering. It has been brought about by the careful study of what are called 'ethnographic parallels,' that is, similarities or identities of laws, games, customs, myths, arts, etc., in primitive tribes located far asunder on the earth's surface. Able students, such as Bastian, Andree, Post, Steinmetz and others have collected so many of these parallels, often of seemingly the most artificial and capricious character, extending into such minute and apparently accidental details, from tribes almost antipodal to each other on the globe, that Dr. Post does not hesitate to say: "Such results leave no room for doubt that the psychical faculties of the individual as soon as they reach outward expression fall under the control of natural laws as fixed as those of inorganic nature."*

As the endless variety of arts and events in the culture history of different tribes in different places, or of the same tribe at different epochs, illustrates the variables in anthropologic science, so these independent parallelisms prove beyond cavil the ever-present constant in the problem, to wit, the one and unvarying psychical nature of man, guided by the same reason, swept by the same storms of passion and emotion, directed by the same will towards the same goals, availing itself of the same means when they are within reach, finding its pleasures in the same actions, lulling its fears with the same sedatives.

The anthropologist of to-day who, like a late distinguished scholar among ourselves,

* Dr. A. H. Post, 'Ethnologische Gedanken,' in *Globus*, Band 59, No. 19.

would claim that, because the rather complex social system of the Iroquois had a close parallel among the Munda tribes of the Punjab, therefore the ancestors of each must have come from a common culture center; or, who, like an eminent living English ethnologist, sees a proof of Asiatic relations in American culture because the Aztec game of *patolli* is like the East Indian game of *parchesi*—such an ethnologist, I say, may have contributed ably to his science in the past, but he does not know where it stands to-day. Its true position on this crucial question is thus tersely and admirably stated by Dr. Steinmetz: "The various customs, institutions, thoughts, etc., of different peoples are to be regarded either as the expressions of the different stadia of culture of our common humanity; or, as different reactions of that common humanity under varying conditions and circumstances. The one does not exclude the other. Therefore the concordance of two peoples in a custom, etc., should be explained by borrowing or by derivation from a common source only when there are special, known and controlling reasons indicating this; and when these are absent, the explanation should be either because the two peoples are on the same plane of culture, or because their surroundings are similar."*

This is true not only of the articles intended for use, to supply the necessities of existence, as weapons and huts and boats—we might anticipate that they would be something similar, otherwise they would not serve the purpose everywhere in view; but the analogies are, if anything, still more close and striking when we come to compare pure products of the fancy, creations of the imagination or the emotions, such as stories, myths and motives of decorative art.

It has proved very difficult for the comparative mythologist or the folk-lorist of

the old school to learn that the same stories, for instance, of the four rivers of Paradise, the flood, the ark and the patriarch who is saved in it, arose independently in western Asia, in Mexico and in South America, as well as in many intervening places, alike even in details, and yet neither borrowed one from the other, nor yet drawn from a common source. But until he understands this, he has not caught up with the progress of ethnologic science.

So it is also with the motives of primitive art, be they symbolic or merely decorative. How many volumes have been written tracing the migrations and connections of nations by the distribution of some art motive, say the *svastika*, the meander or the cross! And how little of value is left in all such speculations by the rigid analysis of primitive arts that we see in such works as Dr. Grosse's *Anfänge der Kunst*, or Dr. Haddon's attractive monograph on the 'Decorative Art of British New Guinea,' published last year! The latter sums up in these few and decisive words the result of such researches pursued on strictly inductive lines—"The same processes operate on the art of decoration whatever the subject, wherever the country, whenever the age." This is equally true of the myth and the folk-tale, of the symbol and the legend, of the religious ritual and the musical scale.

I have even attempted, I hope not rashly, to show that there are quite a number of important words in languages nowise related by origin or contact, which are phonetically the same or similar, not of the mimetic class, but arising from certain common relations of the physiological function of language; and I have urged that words of this class should not be accounted of value in studying the affiliations of language.*

* 'On the Physiological Correlation of certain Linguistic Radicals.' By D. G. Brinton. In the *Proceedings* of the American Oriental Society, March, 1894.

* Dr. S. R. Steinmetz, *ubi supra*, Einleitung.

And I have also endeavored to demonstrate that the sacredness which we observe attached to certain numbers, and the same numbers, in so many mythologies and customs the world over, is neither fortuitous, nor borrowed the one from the other; but depends on fixed relations which the human body bears to its surroundings, and the human mind to the laws of its own activity. And, therefore, that all such coincidences and their consequences—and it is surprising how far-reaching these are—do not belong to the similarities which reveal contact, but only to those which testify to psychical unity.*

So numerous and so amazing have these examples of culture-identities become of late years that they have led more than one student of ethnology into a denial of the freedom of the human will under any of the definitions of voluntary action. But the aims of ethnology are not so aspiring. It is strictly a natural science, dealing with outward things, to wit, the expressions of man's psychical life, endeavoring to ascertain the conditions of their appearance and disappearance, the organic laws of their birth, growth and decay. These laws must undoubtedly be correlated with certain mental traits, but it is not the business of the ethnologist to pursue them to their last analysis in the realm of metaphysics. For instance, we may trace all forms of punishment back to the individual's passion for revenge; or we may analyze all systems of religion until we find the common source of all to be man's dread of the unknown; and these will be sufficient ethnologic explanations of both these phenomena, but not a final analysis of the emotion of dread or the

thirst for vengeance. Ethnology declines to enter these realms of abstractions.

I repeat that to define 'the universal in humanity' is the aim of ethnology, that is, the universal soul or *psyche* of humanity.

But let me not be understood as speaking of this as of some entity, like the *ame humaine* of the Comtists. That were sophistical word-mongering in the style of ancient scholasticism. There is no such entity as humanity, or race, or people, or nation. There is nothing but the individual man or woman, the 'single, separate person,' as Walt Whitman says. Hence some of the most advanced ethnologists are ready to give up the *ethnos* itself as a subject of study. Those terms so popular a few years ago, *Völkerpsychologie*, *Völkergedanken*, racial psychology, ethnic sentiments, and the like, are looked upon with distrust. The external proofs of the psychical unity of the whole species have multiplied so abundantly that some maintain strenuously that it is not ethnic or racial peculiarities, but solely external conditions on the one hand and individual faculties on other, which are the factors of culture-evolution.

While I admit that this question is still *sub judice*, I add that the position just stated seems to be erroneous. All members of the species have common human mental traits; that goes without saying; and in addition it seems to me that each of the great races, each ethnic group, has its own added special powers and special limitations compared with others; and that these ethnic and racial psychic peculiarities attached to all or nearly all members of the group are tremendously potent in deciding the result of its struggle for existence.

I must still deny that all races are equally endowed—or that the position with reference to civilization which the various ethnic groups hold to-day is one merely of opportunity and externalities. I must still claim that the definition of the *ethnos* is one

*'The Origin of Sacred Numbers.' By D. G. Brinton. In the *American Anthropologist*, April, 1894. In my *Myths of the New World* (New York, 1868, Chapter III, 'The Sacred Number, its Origin and Applications'), I had shown the prepotency of the number four both in American and Old World mythology, ritual, statecraft, etc.

of the chief aims of ethnology, and that the terms of this definition are not satisfied by geographic explanations. Let me, with utmost brevity, name a few other connotations, prepotent, I believe, in the future fate of nations and races.

None, I maintain, can escape the mental correlations of its physical structure. The black, the brown and red races differ anatomically so much from the white, especially in their splanchnic organs, that even with equal cerebral capacity, they never could rival its results by equal efforts.

Again, there is in some stocks and some smaller ethnic groups a peculiar mental temperament which has become hereditary and general, of a nature to disqualify them for the atmosphere of modern enlightenment. Dr. Von Buschan has recently pointed out this as distinctly and racially pathologic; an inborn morbid tendency, constitutionally recreant to the codes of civilization, and therefore technically criminal.

Once more, one cannot but acknowledge that the relations of the emotional to the intellectual nature vary considerably and permanently in different ethnic groups. Nothing is more incorrect than the statement so often repeated by physicians that the modern civilized man has a more sensitive emotional system than the savage. The reverse is the case. Since the Dark Ages, Europe has not witnessed epidemic neuroses so violent as those still prevalent among rude tribes.

These and a number of similar traits separate races and peoples from each other by well marked idiosyncrasies, extending to the vast majority of their members and pregnant with power for weal or woe on their present fortunes and ultimate destinies. The patient and thorough investigations of these peculiarities is, therefore, one of the most apposite aims of modern ethnology.

In this sense we can speak of the *Volksgeist* and *Völkergedanken*, a racial mind, or the temperament of a people, with as much propriety and accuracy as we can of any of the physical traits which distinguish it from other peoples or races.

For the branch of anthropology which has for its field the investigation of these general mental traits, the Germans have proposed the name 'Characterology' (*Karakterologie*). Its aim is to examine the collective mental conditions and expressions of ethnic groups, and to point out wherein they differ from other groups and from humanity at large; also, to find through what causes these peculiarities came about, the genetic laws of their appearance, and the consequences to which they have given rise.

This branch of anthropology is that which offers a positive basis for legislation, politics and education, as applied to a given ethnic group; and it is only through its careful study and application that the best results of these can be attained, and not by the indiscriminate enforcement of general prescriptions, as has hitherto been the custom of governments.

The development of humanity as a whole has arisen from the differences of its component social parts, its races, nations, tribes. Their specific peculiarities have brought about the struggles which in the main have resulted in an advance. These peculiarities, as ascertained by objective investigation, supply the only sure foundation for legislation; not *a priori* notions of the rights of man, nor abstract theories of what should constitute a perfect state, as was the fashion with the older philosophies, and still is with the modern social reformers. The aim of the anthropologist in this practical field is to ascertain in all their details, such as religions, language, social life, notions of right and wrong, etc., wherein lie the idiosyncrasies of a given group, and frame its laws accordingly.

Perhaps what I have said sufficiently explains the aims of ethnology. Some one has pertinently called it 'the natural science of social life,' because its methods are strictly those of the natural sciences, and its material is supplied by man living in society.

The final arbiter, however, to whom it appeals, is, I repeat, not the *ethnos*, not the social group, but the individual. I think it was Goethe who, nearly a century ago, uttered the pithy remark: "Man makes genera and species; Nature makes only individuals." Hence, the justification of any result claimed by ethnology must come from the psychology of the individual; in his personal feelings and thoughts will be discovered the final and only complete explanation of the forms of sociology and the events of history. As I have elsewhere urged, man himself, the individual man, is the only final measure of his own activities, in whatever direction they are directed.*

On the other hand, the only rational psychology—using that term as a science of the mental processes—must be the outcome of anthropology conducted as a natural science. For thousands of years other plans have been pursued. The philosopher would delve in his 'inner consciousness;' the theologian would turn to his revelation; the historian would reason on his undigested facts; but the psychologist of the future, taking nothing for granted, will define the mentality of the race by analyzing each of its lines of action back to the individual feelings which gave them rise.

It is quite likely that some who have heard me thus far, and have agreed with

* "Man himself is the only final measure of his own activities. To his own force and faculties all other tests are in the end referred. All sciences and arts, all pleasures and pursuits, are assigned their respective ranks in his interest by reference to those physical powers and mental processes which are peculiarly the property of his own species." *Anthropology as a Science*, etc., p. 3.

me, are still dissatisfied. On their lips is that question which is so often put to, and which so often puzzles, the student of the sciences, *cui bono*. What practical worth have these analyses and generalizations which have been referred to?

Fortunately, the anthropologist is not puzzled. His science, like others, has its abstract side, seemingly remote from the interests of the workaday world; but it is also preëminently an applied science, one the practicality and immediate pertinence of which to daily affairs render it utilitarian in the highest degree.

Applied anthropology has for its aims to bring to bear on the improvement of the species, regarded on the one hand as groups, and on the other as individuals, the results obtained by ethnography, ethnology and psychology.

Such an improvement is broadly referred to as an increased or higher civilization; and it is the avowed aim of applied anthropology accurately to ascertain what are the criteria of civilization, what individual or social elements have in the past contributed most to it, how these can be continued and strengthened, and what new forces, if any, may be called in to hasten the progress. Certainly no aims could be more immediately practical than these.

Here again anthropology sharply opposes its methods to those of the ideologists, the dogmatists, and the deductive philosophers. It refuses to ask, What *should* improve man? but asks only, What *has* improved him in the past? and it is extremely cautious in its decision as to what 'improvement' really means. It certainly does not accept the definition which up to the present the philosophies and theologies have offered; any more than it accepts the means by which these claim that our present civilization has been brought about.

This department of anthropology is still in its infancy. We are only beginning to

appreciate that, in the future, political economy, like history, will have to be rearranged on lines which this new science dictates. The lessons of the past, their meaning clearly apprehended, will be acknowledged as the sole guides for the future. It may be true, as De Tocqueville said of the United States, that a new world needs a new political science; but the only sure foundation for the new will be the old.

Applied anthropology clearly recognizes that the improvement of humanity depends primarily on the correct adjustment of the group to the individual; and, as in ethnology, its ultimate reference is not to the group, but to the individual. In the words of John Stuart Mill, the first to apply inductive science to social evolution, it is that the individual may become 'happier, nobler, wiser,' that all social systems have any value.

We may profitably recall what the same profound thinker and logician tells us have been up to the present time the prime movers in human social progress. They are: first, property and its protection; second, knowledge and the opportunity to use it; and third, coöperation, or the application of knowledge and property to the benefit of the many.

But Mill was altogether too acute an observer not to perceive that while these momenta have proved powerful stimulants to the group, they have often reacted injuriously on the individual, developing that morbid and remorseless egotism which is so prevalent in modern civilized communities. Nor should I omit to add that the remedy which he urged and believed adequate for this dangerous symptom is one which every anthropologist and every scientist will fully endorse—the general inculcation of the love of truth, scientific, verifiable truth.

It seems clear therefore that the teachings of anthropology, whether theoretical or practical, lead us back to the individual as the point of departure and also the

goal. The state was made for him, not he for the state; any improvement in the group must start by the improvement of its individual members. This may seem a truism, but how constantly it is overlooked in the most modern legislation and schemes of social amelioration! How many even of such a learned audience as this have carefully considered in what respects the individual man has improved since the beginning of historic time? Is he taller, stronger, more beautiful? Are his senses more acute, his love purer, his memory more retentive, his will firmer, his reason stronger? Can you answer me these questions correctly? I doubt it much. Yet if you cannot, what right have you to say that there is any improvement at all?

To be sure, there is less physical suffering, less pain. War and famine and bitter cold are not the sleuthhounds that they once were. The dungeons and flames of brutal laws and bigoted religions have mostly passed away. Life is on the average longer, its days of sickness fewer, justice is more within reach, mercy is more bountifully dispensed, the tender eye of pity is ever unscarfed.

But under what difficulties have these results been secured? What floods of tears and blood, what long wails of woe, sound down the centuries of the past, poured forth by humanity in its desperate struggle for a better life! A struggle which was blind, unconscious of its aims, unknowing of the means by which they should be obtained, groping in darkness for the track leading it knew not whither.

Ignorant of his past, ignorant of his real needs, ignorant of himself, man has blundered and stumbled up the thorny path of progress for tens of thousands of years. Mighty states, millions of individuals, have been hurled to destruction in the perilous ascent, mistaking the way, pursuing false paths, following blind guides.

Now anthropology steps in, the new Science of Man, offering the knowledge of what he has been and is, the young but wise teacher, revealing the future by the unwavering light of the past, offering itself as man's trusty mentor and friend, ready to conduct him by sure steps upward and onward to the highest summit which his nature is capable of attaining; and who dares set a limit to that?

This is the final aim of anthropology, the lofty ambition which the student of this science deliberately sets before himself. Who will point to a worthier or a nobler one?

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*THE PROVIDENTIAL FUNCTIONS OF GOVERNMENT WITH SPECIAL REFERENCE TO NATURAL RESOURCES.**

It is with considerable hesitation that I undertake the duty which you have seen fit to impose upon me, namely, of addressing you in a representative manner on a subject of Economic Science. For I may not claim to be an expounder of its laws, although engaged in its practical application; much less do I pretend to be a representative of the science, if science it be.

This doubt alone, whether there is as yet such a thing as economic science, should unfit me for my present position before you, who have chosen this field of human inquiry as your specialty and hold it, I presume, as correlated with equal value to all the other sciences established as such.

But even conceding the right to such a correlation which I know is maintained practically by the most eminent men, I am still inclined to doubt the propriety of the title which is applied to this section of the Association for the Advancement of Science, for I conceive that the intention could

not have been to single out for representation in the great concourse of sciences one portion and one method of the greater separate field of inquiry, but that the title of Economic Science was in reality supposed or intended to be inclusive of all those branches of knowledge which deal with the phenomena of political, commercial, economic and social life of mankind, and which might be comprised in the all-inclusive name of Social Science, Anthropology in Section *H*, forming its historical or descriptive part.

At least since this section *I* was formed, if not before, it has been recognized that political economy, or economics, was only a branch of a larger science, the science of the social biology of man, and that this branch could not be satisfactorily developed for any length of time without reference to and without an equal development of all other branches of the system. Hence to be abreast with the times, at least in classification and nomenclature, we should rechristen this Section to be the Section of Social Science, which to my mind would assign it its proper place in the concourse of sciences represented in the Association. Social Science would then have to determine the forces and laws and to explain the phenomena of social life, and finally, as applied social science, to direct the development of the political, economic, commercial and social intercourse of man; these four aspects of social life being all inclusive and at the same time so differentiated as to admit of their more or less separate study and largely, never entirely, independent development.

Perhaps I owe you an explanation, if not an apology, for my doubt as to whether we are *as yet* justified in classing this branch of knowledge as a science. This doubt, which I notice is shared by others, has arisen from the observation that the discussions in this field are still progressing to a very large ex-

* Address of the Vice-President, Section I, American Association for the Advancement of Science, at the Springfield Meeting, August 29, 1895.